PRECAUTIONS

None of the women with medical contraindications to pill use is a candidate for the patch, unless the problem with pills relates to intestinal absorption of hormones. Additionally, women with conditions that affect the skin beneath the patch should not use the patch. The patch should not be placed over skin that is red, irritated, or cut. Women with psoriasis, eczema or sunburn may not be able to use the patch. Women should periodically confirm that the patch is firmly adherent and avoid using any creams, lotion, or oils near the patch since those agents may cause the patch to detach. The effectiveness of the patch is reduced in women who weigh more than 198 pounds.

PROVIDING THE TRANSDERMAL PATCH

Talk to the patient about how and where to store her patches. Remind her that when she removes a patch, she should fold it closed to reduce release of the hormones. She should not flush the used patch into the water system, but should dispose of it in the garbage as solid waste.

The patient can start her patch on the Sunday following the first day of her menses or on the first day of her flow. If she starts on Sunday, she should use a back-up method for 7 days; if she starts on the first day of her flow, she needs no back-up method. The calendar reminders that accompany the patches can accommodate either approach. The Quick Start for the patch may be reported soon.

Switching from other methods. Contraceptive sex hormone levels reach reliably therapeutic levels about 48 hours after patch placement; therefore, women switching from OCs should apply their first patch as soon as their pill withdrawal period starts, but no later than 4 to 5 days after their last active pill. If they use the Sunday start method, they will need 7 days of back-up contraception. They should *not* wait until they complete their last pack of pills to start the patch. Women switching from injectable contraceptives (DMPA) should apply their patches when they are due for their next injection.

MANAGING PROBLEMS AND FOLLOW UP

Dislodged or detached patches. During clinical trials involving over 70,000 patches, fewer than 3% required replacement for partial detachment and fewer than 2% were replaced because they became fully detached. Patches adhered well in humid conditions (saunas), in exercise conditions, and during swimming. In freezing weather, the patch should be worn beneath clothing.

- If the patch is partially detached, it should be firmly pressed in place for 10 seconds. Reconfirm that the edges are sticking well. If it sticks well, the woman can continue to use it for the full 7 days. If it does not stick well, tell her to remove it and apply a replacement patch.
- If the patch is completely detached, she should try to reapply the same patch if it is clean and usable. If it cannot be used, tell her to apply a new patch immediately.

If the patch has been partially or completely detached for more than 24 hours or if the woman does not know how long it has been loose, instruct her to use a back-up method for 7 days. Consider the need for emergency contraception.

Missed patches and late patches. Management of missed patches depends upon which patch is forgotten and how long it is missed:

When patched missed	Management
1st week patch.	• If a patch is forgotten or late the first week, give emergency contraception if the woman has had unprotected intercourse. • Tell her to place the patch immediately. • She should use a back-up method for 7 days. • The woman will change her patch each week on the day of the week she started this new patch from now on.
2nd—3rd week patch	• *1-2 days late*: the woman must remove the old patch and place a new one immediately. No back-up method or emergency contraception is needed. • *More than 2 days late*: Have her remove the old patch and place a new one on immediately. Provide emergency contraception if she has had unprotected intercourse (especially if she is 4 days or more late applying her patch). She should use back-up method for 7 days. Tell her to change the patch each week on the day of the week that she placed this new patch.
4th week patch	• Tell her to remove the patch. • She should place a new one on the usual day. • No back-up method or emergency contraception is needed.

USING THE TRANSDERMAL SYSTEM

One patch is used for 7 days. Apply a new patch once a week on the same day for 3 weeks in a row. During the 4th week, do not wear a patch. At the end of the week, start another cycle of patches.

Applying the patch

1. Each patch is packaged in an individual foil packet. To place the patch, open the pouch by tearing along the top edge and one side edge. Peel the foil pouch apart and open it. Lift the patch and its clear plastic cover out of the foil pouch together by using a fingernail to peel the unit off the foil pouch.
2. Fold the patch open. Hold onto one half and peel the plastic off the other half. Apply the sticky side of the opened patch to the skin. Press it in place. The patch can be placed on the buttock, abdomen, upper torso (excluding the breasts), or on the outside

of the upper arm. Avoid placing patches in areas of friction such as under bra straps or thongs. The patch should be applied only to clean, dry skin. Do not put it over skin that is irritated, sunburned, red or infected. Make sure there are no creams, oils, sunscreen, or sweat on the skin or the patch will not adhere.

3. Fold the patch in half, remove the clear plastic cover, open it and apply the rest of the sticky side of the patch to the skin. Press firmly on the patch for 10 seconds. Run your finger around the edges of the patch to make sure that all parts of the patch are sticking properly.

Wearing the patch

1. Keep the patch in the same place for 7 days; then remove it. Check the patch every day to make sure it is fully adherent.
2. Apply a new patch in a different spot on your body. Wear it for 7 days. Repeat the procedure for a third week.
3. During the fourth week, do not wear a patch. You will begin your menstrual period.
4. After a week without wearing a patch, apply a new "first-week" patch on the same day of the week you applied your other patches.
5. Store the patches in their protective pouches at room temperature.

Removing the patch

1. To remove the patch, grasp it by an edge and pull it off. Fold it closed on itself on the adhesive side to seal in the medication.
2. Discard the patch in the solid waste garbage; do not flush it into the waste water system.
3. If any stickiness or adhesive remains on your skin, remove it by using baby oil; do not use harsh chemicals such as nail polish remover, alcohol, etc.

Vaginal Contraceptive Ring

The vaginal contraceptive ring (NuvaRing) is a flexible, soft, transparent ring made of the plastic ethylene vinyl acetate. The ring has an outer diameter (side to side) of 54 mm and a cross-sectional diameter of 4 mm. The ring releases ethinyl estradiol and etonorgestrel in steady, low doses so that serum levels are lower than the patch or pills.

The woman places one ring high in the vaginal once every 28 days. The ring is kept in place for 21 days and removed for a 7-day ring-free period to permit withdrawal bleeding. Hormonal levels needed to suppress ovulation are achieved within the first day of vaginal ring use, so there is no delay in onset of contraceptive protection, as seen with the transdermal patch. The ring has a steady release rate, so serum hormone levels do not fluctuate during the day the way they do with OCs.

Advantages

The once-a-month self-administered use permits convenience, privacy, and ease of use. It is relatively easy for a woman to confirm that the device is in place. The NuvaRing releases low, steady amounts of ethinyl estradiol and etonorgestrel. Cycle control is another advantage; in every cycle, fewer than 10% of women experienced any untimely spotting or bleeding. In a comparative trial of vaginal ring versus a 30 mcgEE/0.15 levonorgestrel OC, the NuvaRing provided significantly better cycle control.[182] Overall satisfaction with the method was relatively high (85%); 96% to 98% of users reported that the ring was easy to insert and remove; and 83% said they rarely or never felt the ring during intercourse. Nine out of 10 study participants said they would recommend the vaginal ring to a friend.[183]

Disadvantages and Cautions

Some women may be hesitant to touch their genitalia to place and remove the rings. Although the rings may be stored at room temperature for up to 4 months, it is generally preferred that rings be kept refrigerated to prolong their active life. This may pose challenges for women who need private methods.

Health complications. In addition to the health complications associated with combined hormonal contraceptives (myocardial infarction, stroke, VTE, hypertension, diabetes, cholestatic jaundice, hepatic neoplasms, etc.), the vaginal delivery system may be associated with localized conditions such as vaginal discomfort and vaginal discharge.

Side effects. Overall, relatively few users reported hormone-related side effects: headaches (5.8%), nausea (3.2%), and breast tenderness (2.0%). Local side effects specific to the ring were also reported at the following rates: vaginitis (5.6%), leukorrhea (4.6%), other device-related problems (4.4%), and vaginal discomfort (2.4%).

In the combined (North American and European) clinical trial, 15.1% of women withdrew because of adverse events such as the sensation of a foreign body, coital problems and expulsion; headaches (1.3%); emotional lability (1.2%); and weight increase (1%). Fewer than 1% of women stopped because of bleeding irregularity, vaginitis, or leukorrhea.

Precautions

Women who have medical contraindications to OC use (except for those contraindications related to intestinal absorption problems) are not candidates for the vaginal ring, nor are women who have significant pelvic relaxation, are unable to touch their genitalia, or who have vaginal obstruction. The NuvaRing may not be suitable for women with conditions that make the vagina more susceptible to infection or ulceration. The NuvaRing should not be used in conjunction with a diaphragm, since it may prevent correct placement of that barrier.